

# FABA BEAN PRODUCTION 101



### Description

HGI faba beans are smaller-seeded legumes adapted to cooler, moist growing regions. These annual legumes grow upright with one or more erect stems. Faba beans have a strong tap root and are one of the most efficient nitrogen fixing species on the planet (3lbs of nitrogen for every bushel harvested). Pods grow to about 10cm long, and reach maturity in 100-130days depending on the variety.

### Field Selection

Faba beans prefer medium soil textures and grow best in gray, black and dark brown soil zones. They like moisture and tolerate flooding better than most other pulses. They need a minimum of 8-10inches of moisture during the growing season. If growing on brown/lighter soils, irrigation is highly recommended.

### Seeding

Plant faba beans EARLY! Faba beans are spring frost tolerant and can germinate in 3°C soil temperature. Faba beans need to be seeded into moisture 1.5-2 inches deep. It is recommended to keep high tannin/vicine varieties at least 500m away to reduce chance of cross pollination and grain contamination. Inoculants used for pea/lentil are recommended (*Rhizobium leguminosarum*), as well as seed treatments.

Seeding rates should be around target 45plants/m<sup>2</sup> (2.5-3.5 bu/ac). To reduce air seeder plugging issues, reduce seeding speed and watching for pinched or kinked hoses.

### Fertility Requirements

Faba beans are very effective nitrogen fixers so no additional N is needed, but they do have a high requirement for phosphorous. It is suggested 30-40lbs/acre of phosphorous is required applied in a side band, mid row band, or seed placed. Grain yields are very dependent on moisture with an average of 50-100bu/acre.

### Weed, Disease and Pest Management

Early development and emergence is slow due to early seeding, so it is important for good pre-emergent weed control. Weeds are best controlled through proper field selection, a pre-seeding burn-off and previous fall burn off applications using recommended herbicides. There are several grassy and broad leaf in crop weed control options available.

There are several pests that faba beans will attract but lygus bugs cause the most damage to faba beans. They can be prevented by scouting and applying insecticides.

Unlike pea and lentils, faba beans are tolerant to most root rot diseases including aphanomyces. Faba beans should be scouted for ascochyta and botyitis and controlled with fungicides.

### Harvest, Drying and Storage

Faba bean harvest dates will be reflective of available moisture and seeding dates, but harvest will typically take place 100-130 days after seeding.

Faba beans will start to mature as the lower leaves drop and lower pods turn black. Plants can be desiccated any where from end of August to mid September when plants are about 70-80% color change. After desiccation plants can be harvested 10-14 days later.

Swathing is also an option and can be done when 20% of the pods have turned black. Combining can be started when grain moisture content is at 18-20% moisture then dried down to 16% with aeration.

It is important to reduce cracking of the seed coat during harvest and handling. It is best to use equipment like belt conveyors and buckets to handle faba beans.

### Markets

Faba bean (low vicine/low tannin varieties) protein fractions are becoming popular plant-based proteins with food manufacturers. Breeding efforts have remove anti-nutritional components such as tannin and vicine have made it a strong competitor to pea protein in these markets due to a more neutral flavor. Animal feed markets are also available with low tannin varieties.



Small Seeded, High Yielding,  
Low Vicine, No Tannin



**NAVI**

**1142-16**

- small seed, no tannin, low vicine
- High grain yielder
- Kernel weight: 401 grams/1000 kernels
- Days to Maturity: ~ 110+ days

- small seed, no tannin, low vicine
- High grain yielder
- Kernel Weight: 363 grams/1000 kernels
- Days to Maturity: ~ 100+ days

## Why should you grow faba beans?

- you are farming on soils with good water holding capacity or irrigation
- you are looking for spring frost and cold soil tolerant crop
- you are looking to spread seeding and harvest dates with early season crop
- you need a pulse rotation crop resistant to root diseases that devastate peas and lentils
- you want a pulse crop with lodging resistance
- you want to grow your own source of sustainable, regenerative nitrogen to help reduce input costs, promote soil conservation and increase overall farm profitability

For further information contact:

**Kendra Meier, MSc, PAg**  
Director of Operations  
Western Region (western SK & AB)

306.715.2733  
kendra.meier@hempgenetics.com